

## PREVALENCE OF DYSMENORRHEA AMONG COLLEGE STUDENTS: AN OBSERVATIONAL STUDY

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*Article Received: 21 January 2025 | Article Revised: 10 February 2025 | Article Accepted: 03 March 2025*

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DOI: <https://doi.org/10.5281/zenodo.15112681>

**How to cite this Article:** Dr. P. Renuga, Dr. V. Sharmatha, Karthik Raja R., Keerthi R., Krishnamoorthi M., Dr. S. Kannan (2025). PREVALENCE OF DYSMENORRHEA AMONG COLLEGE STUDENTS: AN OBSERVATIONAL STUDY. World Journal of Pharmaceutical Science and Research, 4(2), 214-222. <https://doi.org/10.5281/zenodo.15112681>



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### ABSTRACT

**Background:** Dysmenorrhea or painful menstrual cramps, is one of the most common gynecological complaints among adolescent girls and young women's. The purpose of the present study is to analyze the prevalence, characteristics, and effects of dysmenorrhea among adolescent girls in selected residential colleges of Bhavani taluk, Erode district. **Objectives:** This study was conducted to evaluate dysmenorrhea and associated symptoms among adolescent and young women's in selected residential college of Bhavani taluk, Erode district and also to educate and create awareness regarding dysmenorrhea, its management, and reproductive health among adolescent girls. **Methodology:** An observational study was conducted among 307 adolescent girls in selected residential college of Bhavani taluk Erode district using a structured questionnaire. Inclusion criteria was all adolescent girls who had reached menarche, in the age group of 17-25 and girls suffering from PCOS, endometriosis, and fibroids. The study does not include girls below the age of 17 years or above 25 years, those who take oral contraceptives, and also people with previous medical conditions like diabetes, hypothyroidism. **Results:** The present study showed that most of the adolescent girls 163(53.1%) have a lack of knowledge about dysmenorrhea. Out of 307 samples 207(67.42%) had mild pain, 31(10.1%) had moderate pain, 29(9.44%) had severe pain, 40(13.02%) had no pain during menstruation. Most common symptoms experienced by the girls was cramp pain 109(35.5%); other symptoms experienced during menstruation were bleeding 95(30.94%), vomiting 66(21.49%), nausea 37(12.05%). Menstruation impacts daily activities for 107(34.8%) of the study population and most of the student lacked knowledge about the names of medications used for relieving menstrual pain. **Conclusion:** Based on the current study, it can be concluded that dysmenorrhea is a significant health issue among adolescent girls that hampers their daily activities, academic performance, and quality of life. This study underlines the importance of proper menstrual education, awareness of non-pharmacological treatment options, and supportive measures to empower adolescent girls to manage their menstrual health efficiently.

**KEYWORDS:** dysmenorrhea; menstruation; knowledge; adolescent.

## INTRODUCTION

Dysmenorrhea is referred to as painful pelvic cramps during menstruation.<sup>[1]</sup> Common clinical manifestations of this condition are sickness, vomiting, diarrhea, abdominal swelling, constipation, and indigestion. Other symptoms include irritability, headache, fatigue, and low back pain.<sup>[2]</sup> According to global data, dysmenorrhea is the most prevalent gynecological alteration and one of the most common causes of pelvic pain in women of reproductive age worldwide.<sup>[3]</sup> It is clinically divided into primary and secondary dysmenorrhea.<sup>[4]</sup> Primary dysmenorrhea is almost always presented in ovulatory cycles without underlying diseases.<sup>[4,5,6]</sup> On the other hand, secondary dysmenorrhea is caused by diverse pathologies or structural abnormalities within or outside the uterus (e.g., endometriosis, genital infections, adenomyosis, pelvic inflammatory disease, and interstitial cystitis).<sup>[7]</sup> It is noteworthy that the appearance of dysmenorrhea may reduce the quality of life (QoL) significantly in a considerable percentage of affected women (16%-29%).<sup>[2,8]</sup> Moreover, it has been shown that the degree of discomfort that dysmenorrhea produces may lead to absenteeism from school and work in severe cases.<sup>[9]</sup> Thus, the therapeutic approach to this disorder is essential. In this regard, first-line treatments for dysmenorrhea include non-steroidal anti-inflammatory drugs (NSAIDs) and oral contraceptive pills.<sup>[5]</sup> Other therapeutical alternatives include intrauterine hormonal devices (IUDs), transcutaneous electric nerve stimulation (TENS), transdermal nitroglycerin patches (TNP), acupuncture, heating pads, and surgical procedures (in certain underlying pelvic disorders).<sup>[10]</sup> Likewise, several studies have suggested the usefulness of herbal remedies and other complementary and alternative medicine (CAM) options to treat dysmenorrhea.<sup>[11,12,13,14,15,16]</sup>

## METHODOLOGY

This study utilized an observational design conducted for 3 months from December 2024 to February 2025, in colleges within Bhavani Taluk, Erode District, with an enrolment of 307 participants, utilizing a structured questionnaire that covered the following data: demographic profile, menstrual history, symptoms of dysmenorrhea, impact of pain on daily activities, and questions related to quality of life. The informed verbal consent was obtained from parents/guardians and written consent from respondents, and descriptive analysis was performed using percentages. Inclusion criteria was all adolescent girls who had reached menarche, in the age group of 17-25 and girls suffering from PCOS, endometriosis, and fibroids. The study does not include girls below the age of 17 years or above 25 years, those who take oral contraceptives, and also people with previous medical conditions like diabetes, hypothyroidism.

## RESULT

### 1. Description of baseline variables

Majority of adolescents girls 239(77.9%) belongs to the age group of 17-20 years as shown in Table 1. In that most of the adolescent girls 92(29.9%) were studying in the first year. Out of 307 samples most of the adolescent girls 290(94.46%) were not having past medical history. Majority of adolescent girls 171(55.7%) were having vegetarian.

**Table 1: Description of baseline variables.**

N=307

S.no	Sample characteristics	Frequency	Percentage (%)
1.	Age in years		
	17-20	239	77.9
	20-25	68	22.14
2.	Year of study		
	1 <sup>st</sup>	92	29.9
	2 <sup>nd</sup>	86	28.01
	3 <sup>rd</sup>	78	25.4

	4 <sup>th</sup>	51	16.61
3.	Past medical history		
	Yes	17	5.53
	No	290	94.46
4.	Dietary pattern		
	Vegetarian	171	55.7
	Mixed diet	109	35.5

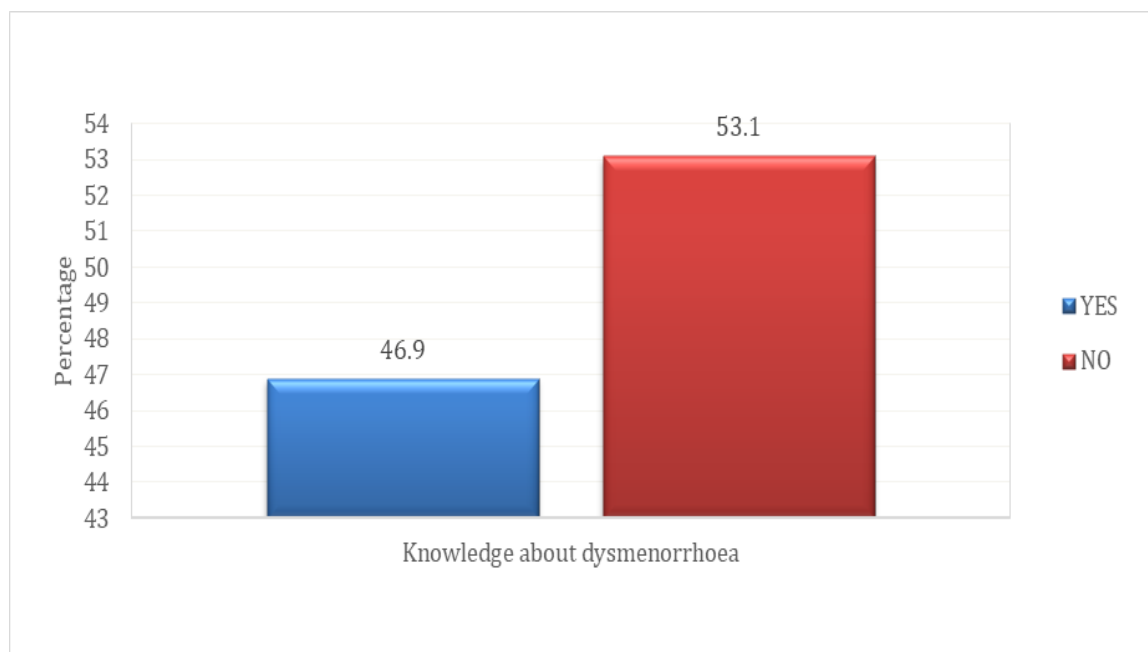
## 2. Dysmenorrhoea and associated symptoms

Majority of the adolescent girls 163 (53.1%) lacked knowledge about dysmenorrhea. Among the 307 samples 207(67.42%) reported mild pain, 31(10.1%) experienced moderate pain, 29(9.44%) had severe pain, and 40(13.02%) reported no pain during menstruation, as shown in table 2.

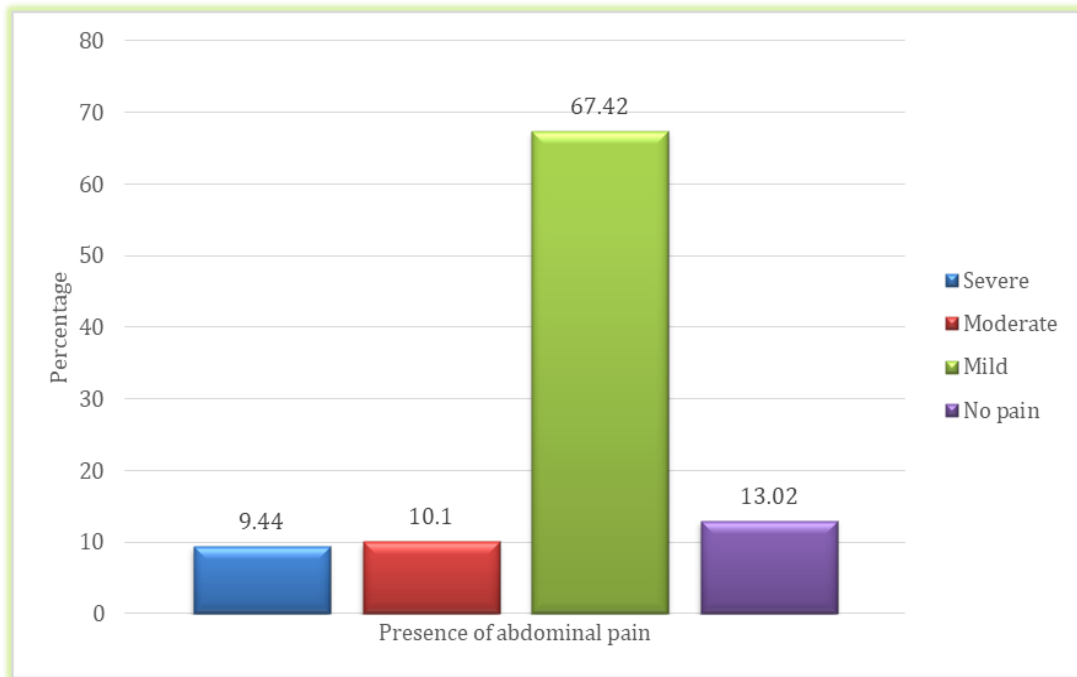
**Table 2: Dysmenorrhea and associate symptoms**

N=307

S.no	Sample characteristics	Frequency	Percentage (%)
1.	Knowledge about dysmenorrhea		
	Yes	144	46.9
	No	163	53.1
2.	Presence of abdominal pain		
	Severe	29	9.44
	Moderate	31	10.1
	Mild	207	67.42
	No pain	40	13.02



**Figure 1: Knowledge about dysmenorrhoea.**



**Figure 3: Presence of abdominal pain.**

The ranking of the symptoms in table 4, showed cramp pain 109(35.5%), bleeding 95(30.94%) as the most common symptoms associated with menstruation. Vomiting 66(21.49%), Nausea 37(12.05%) were the least common symptoms associated with menstruation among adolescent girls.

**Table 3: Physical symptoms.**

N=307

S.no	Physical symptoms	Frequency	Percentage (%)
1.	Nausea	37	12.05
2.	Vomiting	66	21.49
3.	Cramp pain	109	35.50
4.	Bleeding	95	30.94

**3. Dysmenorrhea characteristics**

**3.1 Description of mensural history**

Majority of the adolescent girls 210(68.4%) attained menarche at the age of 13-15 years and in the most of the adolescent girls 252 (82.08%) are having a menstrual cycle of 28-30 days duration as shown in Table 4.

**Table 4: Description of mensural history.**

N=307

S.no	Sample characteristics	Frequency	Percentage (%)
1.	Age of menarche		
	<12	48	15.63
	13-15	210	68.4
	15-18	45	14.65
	>18	4	1.3
2.	Duration of menstrual cycle		
	15-20	44	14.33
	28-30	252	82.08
	2 months and above	11	3.6

### 3.2 Description on the effect of menstrual pain

Most of the adolescent girls 195(63.51%) do not experience trouble or worries during their menstruation. When the study population was asked about the impact on their daily activities, it was found that 107(34.8%) reported difficulties during their mensuration.

**Table 5: Description on the effect of menstrual pain.**

N=307

S. No	Sample characteristics	Frequency	Percentage (%)
1.	Trouble or worries with mensuration		
	Yes	112	30.48
	No	195	63.51
2.	Effect on daily activities		
	Yes	107	34.8
	No	200	65.14

### 4. Usage of medication for pain relief

Only 18 out of 307 participants (5.86%) reported taking pain killers during menstrual pain. Even among those taking medication, only a small number 14 (4.56%) used it for more than 4 days.

**Table 6: Usage of medication for pain relief.**

N=307

S.no	Medication	Frequency	Percentage (%)
1.	Pain killers		
	Yes	18	5.86
	No	289	94.14
2.	Duration of medication		
	1-2 days	9	2.93
	3-4 days	10	3.26
	More than 4 days	14	4.56

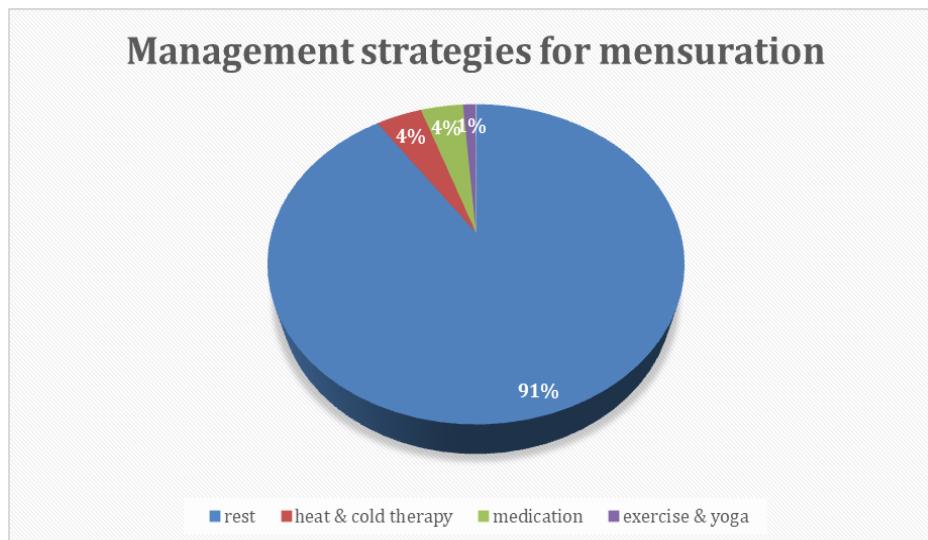
### 5. Management strategies for menstruation

Table 7 shows the management strategies for menstruation. The participants reported that they used multiple treatments to relieve the symptoms such as rest 273(88.92%), heat and cold therapy 13(4.23%), medication 12 (3.9%), exercise and yoga 9(2.93%). More than 80% of the participants took a rest to get relief from menstrual pain.

**Table 7: Management strategies for menstruation.**

N=307

S. no	Management strategies for menstruation	Frequency	Percentage (%)
1.	Rest	273	88.92
2.	Medication	12	3.90
3.	Heat and cold therapy	13	4.23
4.	Exercise and yoga	09	2.93



**Figure 3: Management strategies for menstruation.**

## DISCUSSION

Dysmenorrhea substantially compromises the overall quality of life of those who suffer from it, and is almost like a chronic illness. It also causes constant embarrassment and disruption of routine life. The objective of the present study was to assess the knowledge on mensural hygiene practice among the adolescent and young woman's in selected residential college of Bhavani Taluk, Erode district. The present study reflected that most of the adolescent girls 163(53.1%) have a lack of knowledge about dysmenorrhea.

### 1. Dysmenorrhea characteristics

An observational survey was conducted in Bhavani taluk colleges (VASAVI, SSM, AISHWARYA) on 307 female students, to assess the knowledge about dysmenorrhea. The majority of students 210 (68.4%) reported their menarche (first menstrual period) occurred between the ages of 12 and 14 years. Most of the students 252(82.08%) had a menstrual cycle duration of 28-30 days. Only a few students 11(3.6%) had a cycle length of 2 months and above. Most of the students 290(94.46%) did not have any past medical history. The leading complaints from the adolescent girls concerning the symptomology during menstruation include Menstrual cramp (35.5%) and heavy bleeding (30.94%) followed by vomiting at (21.49%) and nausea (12.05%).

### 2. Influence of pain during menstruation

Most adolescent girls, that is (63.51%) of them, did not complain of having a problem or a care on menstruation day. When asked about the impact on daily life, (34.8%) reported experiencing difficulties during their period. 19.51% of adolescent girls suffered from moderate or severe abdominal pain during their menstruation.

### 3. Management strategies for menstruation

The majority of the students (88.92%) relied on rest as the primary method to alleviate menstrual pain and other methods like medication, heat & cold therapy, yoga & exercise.

The students were found to lack the majority of knowledge on the names of medications used for menstrual pain relief. Only 5.86% of the students reported that they took pain killers for menstrual pain, while 4.56% reported using it for more than 4 days.

## CONCLUSION

Based on the current study, it can be concluded that dysmenorrhea is a significant health issue among adolescent girls that hampers their daily activities, academic performance, and quality of life. This study underlines the importance of proper menstrual education, awareness of non-pharmacological treatment options, and supportive measures to empower adolescent girls to manage their menstrual health efficiently.

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**QUESTIONNAIRE FOR DYSMENORRHEA:**

1. Name: -----
2. Age: -----
3. Weight: -----
4. Course: -----
5. Past medical history: -----
6. Marital status:
  - Married
  - Unmarried
  - Others
7. Do you know what is dysmenorrhea?
  - Yes
  - No
  - Don't know
8. Do you have painful periods?
  - Yes, so extremely painful that, even if take painkillers, I have to stop my usual daily activities
  - Yes, so painful that I have to take painkillers to be able to do my usual daily activities
  - Yes, I have a mild bearable pain only the first day menstrual cycle
  - No
9. What is the average length of the menstrual cycle in most women?
  - 15-20 days
  - 28-30 days
  - 2 months and above
10. Age of menarche
  - 9-12 years
  - 13-15 years
  - 15-18 years
  - 18 years and above
11. Do you have any trouble or worries with menstruation?
  - Yes
  - No
12. Which kind of painkiller you taking? -----
13. The symptoms during from a period is
  - Nausea
  - Vomiting
  - Bleeding



- Cramps pain
14. Do you use NSAIDs, if yes duration?
- 1 to 2 days
- 3 to 4 days
- More than 4 days
- No
15. How do you feel about using painkiller in dysmenorrhea?
- Reduce the pain
- Relive pain
- No effect
- Never used
16. Do you have COPD?
- Yes
- No
- Under treatment
- Recovered
17. What do you do at home to manage your periods pain?
- Medication
- Heat or cold therapy
- Exercise or yoga
- Rest
18. Do you avoid daily activities due to fear of pain?
- Yes
- No
19. What is your dietary pattern?
- Vegetarian
- Mixed diet
20. Colour of your periods Blood

